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| <b>Notice of Allowability</b> | <b>Application No.</b> | <b>Applicant(s)</b> |  |
|-------------------------------|------------------------|---------------------|--|
|                               | 10/692,789             | OKUYAMA, HIDEYUKI   |  |
|                               | Examiner               | Art Unit            |  |
|                               | Juanita D. Stephens    | 2853                |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1.  This communication is responsive to Application files 8/25/2004.
2.  The allowed claim(s) is/are 1-13.
3.  The drawings filed on 25 August 2004 are accepted by the Examiner.
4.  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a)  All    b)  Some\*    c)  None    of the:
    1.  Certified copies of the priority documents have been received.
    2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3.  Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5.  A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6.  CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
  - (a)  including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached  
 1)  hereto or 2)  to Paper No./Mail Date \_\_\_\_\_.
  - (b)  including changes required by the attached Examiner's Amendment / Comment or in the Office action of  
 Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7.  DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |  |  |
|--|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____. |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date <u>10/27/2003</u> | 7. <input type="checkbox"/> Examiner's Amendment/Comment                               |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material                                 | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance   |
|  | 9. <input type="checkbox"/> Other _____.   |

## DETAILED ACTION

### ***Allowable Subject Matter***

1. Claims 1-13 are allowed.
2. The following is an examiner's statement of reasons for allowance:

The prior art does not disclose, suggest, or render obvious the combination of an ink tube using a thermoplastic elastomer composition, having a Shore-A-hardness of not more than 70, comprising an olefin thermoplastic resin and a rubber component, containing not less than 30 wt% of butyl rubber. This invention solves the problem of providing an ink tube made of vulcanized rubber to have low water vapor permeability and air permeability and at the same time a high degree of flexibility.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The prior art of Shibata et al. (US 6,557,987 B1) at least teaches a flexible conduit (Figure 2) for an ink jet printer having two layers, wherein the innermost layer comprises a material that forms a liquid barrier and prevents leakage of ink, such materials include polyethylene and polypropylene homo-polymer, and an outermost layer comprising a material that forms a barrier against the air, however is flexible, such

material include, nylon, polyethylene, and polypropylene co-polymer, **but does not disclose** a thermoplastic elastomer composition, having a Shore-A-hardness of not more than 70, comprising an olefin thermoplastic resin and a rubber component, containing not less than 30 wt% of butyl rubber.

The prior art of Van Roy (US 6,726,314 B2) at least teaches a flexible hose (Figure 2) for an ink jet printer in which the permeability of materials to air and water, having a Shore-A-hardness of preferably lower than 100, made of polyethylene, Teflon and Viton rubber, **but does not disclose** a thermoplastic elastomer composition, having a Shore-A-hardness of not more than 70, comprising an olefin thermoplastic resin and a rubber component, containing not less than 30 wt% of butyl rubber.

The prior art of Scardovi et al. (US 4,689,641) at least teaches a conduit (Figure 13) for an ink jet printer made of soft synthetic rubber which is impermeable with respect to gases and vapours, for example of the butyl-fluorinate type, with a Shore-A-hardness of between 30 and 75, **but does not disclose** a thermoplastic elastomer composition, having a Shore-A-hardness of not more than 70, comprising an olefin thermoplastic resin and a rubber component, containing not less than 30 wt% of butyl rubber.

#### **Contact Information**

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Juanita D. Stephens whose telephone number is (571) 272-2153. The examiner can normally be reached on Flex.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Meier can be reached on (571) 272-2149. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Juanita D. Stephens  
Primary Examiner  
Art Unit 2853

February 21, 2005